

# Washington Correlator

David M. Hall

**Abstract** This report summarizes the activities of the Washington Correlator for the years 2015 and 2016. The Washington Correlator provides up to 80 hours of attended processing per week plus up to 40 hours of unattended operation, primarily supporting Earth Orientation and astrometric observations.

## 1 General Information

The Washington Correlator (WACO) is located at and staffed by the U.S. Naval Observatory (USNO) in Washington, DC, USA. The correlator is sponsored and funded by the National Earth Orientation Service (NEOS), which is a joint effort of the USNO and NASA. Dedicated to processing geodetic and astrometric VLBI observations, the facility spent 100 percent of its time on these sessions. All of the weekly IVS-R4 sessions, all of the IVS-INT01 Intensives, and the APSG and CRF sessions were processed at WACO. The facility houses the WACO DiFX correlator.

## 2 Activities during the Past Two Years

- The Washington Correlator made the transition from the ageing Mark IV correlator to the new DiFX software correlator. Work to achieve the final configuration of the DiFX correlator, its associated servers, and its network is ongoing.

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- The correlator staff continues the testing and repair of Mark 5 modules.
- Intensive observations from Kokee Park and Wettzell were routinely transferred via e-VLBI. 24-hour sessions from both Hobart antennas, Katherine, Yarragadee, Warkworth, Ny-Ålesund, Fortaleza, Yebes, Noto, HartRAO, Wettzell, Tsukuba, Aira, Kashima, Chichijima, and Sintotu were also transferred by high-speed networks.

## 3 Staff

The Washington Correlator is under the management and scientific direction of the Earth Orientation Department of the U.S. Naval Observatory. Staffing problems have been persistent at WACO. In 2016, Daniel Veillette left the VLBI division for another position at USNO. Expedited efforts to hire a replacement and fill an additional position that had been approved led to two new astronomer positions in the VLBI division. In addition a contract for two FTE correlator scientists was executed bringing the senior scientific staff to four.

**Table 1** Staff.

Staff	Duties
David Hall	Chief, VLBI Division
Phillip Haftings	Astronomer
Andrew Sargent	Astronomer
Bruce Thornton	Physical Science Technician
Roxanne Inniss	Media Librarian

**Table 2** Contractors.

Contractors	Company
John Spitzak	CPI
Matthew Hardin	USRA
Khalil Suliman	USRA

## 4 Future Plans

A hardware refresh is planned for the next fiscal year in addition to the expansion of file storage space. Upgrading the high-speed internet connection from 1 Gb/s to 10 Gb/s is also planned for the future.